Lesotho - Land Administration Reform (World Bank)

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Overview

Identification

COUNTRY
Lesotho

EVALUATION TITLE
Land Administration Reform (World Bank)

EVALUATION TYPE
Independent Impact and Performance Evaluation

ID NUMBER
DDI-MCC-LSO-WB-LAND-2019-v1

Version

VERSION DESCRIPTION
- v01: Edited, anonymous dataset for public distribution.

Overview

ABSTRACT
The Millennium Challenge Corporation (MCC) established a partnership with Michigan State University (MSU) to design and conduct the evaluation of the Land Administration Reform Project (LARP). A matched comparison group difference-in-differences evaluation strategy was designed and baseline data were collected in March-June 2013 (https://data.mcc.gov/evaluations/index.php/catalog/85 <https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdata.mcc.gov%2Fevaluations%2Findex.php%2Fcatalog%2F85&data=02%7C01%7Cdali1%40worldbank.org%7C11c4ff0183f64dcbc97c08d703b65bfa%7C31a2fec0266b4c67b56e2796d8f59c36%7C0%7C0%7C636981954074792792&sdata=h4lvOjqxG22KKAfHvspt4fsqKBRDS292GqQkOUMrfNs%3D&reserved=0>), aimed at to test whether the following expected outcomes were realized and attributable to LARP:

(1) Reduction in the financial and time burden of conducting land transaction with LAA and increased efficiency in rendering land administration services to the public by LAA;

(2) Reduction in time for land conflict resolution and reduction in land related conflicts within the areas where there has been intervention amongst the 55,000 lease holders;

(3) Increased number of land parcels used as collateral for mortgage, and increased property investment, subleasing, rentals and other economic activities;

(4) Increased frequency of formal land transaction, increased land values, and increased base case mortgage lending volume;

(5) Increased household income of primary and secondary beneficiaries;

(6) Increased understanding by Basotho of their rights and knowledge about services rendered by the LAA; and

(7) Increased willingness of other land owners outside the regularization impact areas to request formal land title.

After reviewing the initial evaluation design and baseline data, complementary approaches are proposed for impact and performance evaluation of LTRP activities. Besides conducting follow up survey of households interviewed at baseline, geographic discontinuity design (households sampled on both sides the border of treatment wards) and use of time-series high resolution aerial photography are proposed to cost-effectively complement the original methodology and assess the medium-term effect of the different components of LARP. The follow up survey is conducted by the Lesotho Bureau of Statistics and extraction of vector data from 2009 and 2016 high resolution data is done by the World Bank research team. Anonymized clean data will be publicly available once data collection and compilation are completed.

EVALUATION METHODOLOGY
Matched comparison group Difference-in-Difference with geographic discontinuity

UNITS OF ANALYSIS
Households, properties/parcels, individuals

KIND OF DATA
Sample survey data [ssd]

TOPICS

Topic	Vocabulary	URI
Land	MCC Sector	
Gender	MCC Sector	

KEYWORDS
legal reform, land regularization, tenure security, land-related investmentes, land transactions, mortgages, land disputes

Coverage

GEOGRAPHIC COVERAGE
The survey covered the following village/sub-villages in MMC1, MMC2, MMC3 and MMC27 in Maseru City

UNIVERSE
1904 households in 40 clusters at the baseline in Maseru

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
World Bank	

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Millennium Challenge Corporation	MCC		Review of Metadata

DDI DOCUMENT ID
DDI-MCC-LSO-WB-LAND-2019-v1

MCC Compact and Program

COMPACT OR THRESHOLD
Lesotho Compact I

PROGRAM
LARP activities are under the Private Sector Development (PSD) Project of the Compact. LARP was implemented in Maseru and nearby areas in Lesotho between 2008 and 2013. MCC's compact 1 project aimed to support private sector development in several ways, including the registration of property rights to land through the Lesotho Land Administration Reform Project (LARP). Specifically, LARP had four sub-activities: (a) Policy and legal reform by which Technical assistance

was made available to assess the legal and regulatory environment for land and adopt land policy and regulatory reforms that promote the use of land as collateral and an economic asset (b) Modernization and improvement of land administration services aimed at decreasing the time and inefficiencies associated with conducting a formal land transaction and increasing confidence in the formal system, thereby increasing demand for formal land registration services. (c) Systematic regularization of land in urban areas and improvement of rural land allocation processes aimed to simplify and streamline lease preparation and registration process through establishing a legal framework for systematic regularization and registration and provide secure land tenure in informal settlements in urban and peri-urban areas through issuing legal documents (referred to as “Lease”) to property owners. MCA hired Land Equity International (pilot activity) and COWI-Orgut (roll-out activity) to carry out the systematic land regularization work and the newly established Lesotho Land Administration Authority (LAA) Registration and Quality Unity (RQU) also carried out systematic regularization in rollout areas. (d) Public outreach and training supported land administration reform activities, including sensitization on LARP rollout and awareness raising on changes in land laws, the establishment of the LAA, women's land rights and conducting land transactions. The four sub-components of the LARP were considered fundamental to promote private sector development and stimulate economic growth. Specifically, they aimed at promoting the use of land as an economic asset by increasing tenure security and capitalization of land assets and ultimately reducing poverty through growth in real income.

MCC SECTOR
Land (Land)

PROGRAM LOGIC
Overall Outcomes- Increased real income because of increased ability to monetize the increasing land value, increased access to formal credit, increased productive investments by households and firms and increased ability to realize full returns from investment. Outcomes- Increased number of registered property rights, increased tenure security and reduced incidents of conflicts. Activity- Policy and legal reforms, Systematic regularization of land, Modernization and improvement in land administration services and Public outreach and training.

Sampling

Study Population

1904 households in 40 clusters at the baseline in Maseru

Sampling Procedure

The first evaluation design used a randomized control trial (RCT) methodology with a two-stage cluster sampling design to select the sampled households' details of which can be found in the baseline report. This impact evaluation strategy designed at baseline had several problems that needed to be addressed for any results derived from an end-line survey to be credible. The main ones are: (i) non-comparability of treatment and control areas; (ii) implementation of similar interventions in the control areas; and (iii) little consideration of information spillovers.
Suggested approaches to address these challenges include:
I) Propensity score matching (PSM): Baseline data shows significant differences in observed characteristics between treatment and control groups. These differences threaten the internal validity of the evaluation. Use of propensity score matching (PSM) design will thus help attenuate selection bias by increasing the balance between treatment and control groups. Conducting the PSM after the baseline helps reevaluate the statistical power of the sample and guide the data collection for the endline survey.
After dropping households with lease certificates and those with missing data, only 1,418 households (931 from treatment and 487 from control) with valid observations remain for the estimation of the PSM model.
The matching exercise is done at the household level, and covariates at the parcel and individual level are aggregated at the household level. The 5-nearest neighbors matching model was estimated using the STATA program psmatch2. Many observable characteristics at individual, household and parcel level (50 covariates in total) can help capture observed differences between treatment and control groups. Overall, there are 108 off-support treated households and 35 unmatched control households with the 5-nearest neighbor matching criteria. The total matched sample size is thus 1,275 households (823 treatment and 452 control households).
The parameters consist of: (i) 40 clusters (28 treatment and 12 controls); (ii) matched sample size of 1,275 households; and (iii) 31.875 average number of households per cluster, 122.4 individuals with valid employment questions per cluster and 38.825 parcels of land per cluster.
II) Geographic discontinuity design: The discontinuity design heavily relies on the assumption that households located near (on both sides of) the road dividing treatment and control area were similar in observed and unobserved characteristics before the start of the land regularization program. Visual assessment of the 2012 aerial photo shows continuity in the density and type of structure of buildings in most parts across both sides of the road. This observation makes geographic discontinuity design with alternative bandwidth (i.e., comparing all units within a fixed distance from the road), as shown in figure 4 with examples of 500-meter and 1000-meter bands, a viable option to supplement the non-randomized design. Administrative data show that there are close to 1200 parcels that were under LARP in the treated 500m band from the road. Assuming continuity in settlement in the corresponding part of the control area points towards a rate of contamination of 10% (for sporadic processes) and 30% (for the 2016 layout plan and surveying exercise by Maseru City Council). For a total sample size of 1702 or 2000, the minimum detectable effects, on average, will be 40% or 50% less than that required for the matching design. This suggests that a complete census of households within 500-meter band of the road dividing treatment and control area can provide a sample size large enough to detect meaningful impacts of the program.
III) Analysis of time series aerial photos: High resolution aerial photography of our area of interest are available for two years covering pre-program (2012) and post-program (2016) period. This approach will allow identification of land use changes with a focus on changes in built-up area and possibly building characteristics (e.g. better roofs or pavement of walkways and yards) in treatment and control area. Examples of the type changes (based on 2012 and 2016 photos) that can be easily detected using aerial photography include: (i) changes in roof types (color or shape); (ii) expansion of built-up area; (iii) construction of new houses (either after demolishing existing structure or conversion of vacant plots); and (iv) completing unfinished structures.
Like the geographic discontinuity design, different bandwidths can be constructed around the main road to increase pre-program comparability between the treatment and control area. Besides, it will allow us to identify and characterize locations in which property development have been taking place during the post-intervention period. Given data will be generated for pre- and post-program periods for the treatment and control area, a difference-in-differences (DID) specification will be used to assess the impact of the program particularly on housing-related investment.
IV) Performance evaluation using administrative data: In addition to the expected impacts at the household level, the LARP legal, regulatory and institutional reforms would help facilitate overall land governance in Lesotho by enhancing the registration of land and mortgage transactions, property development investments, land utilization and urban development, land dispute resolution and gender equality. To conduct such type of performance evaluation, administrative and qualitative data are compiled from several sources. The main ones are: (i) spatial and textual land administration data (including mortgage registration) from the Lesotho Land Administration Authority (LAA) and (ii) data on incidence of building permits from Maseru City Council. Analysis of the administrative data will help answer the following main questions: (i) gender

equality in terms of access to residential land and rights before and after the program as well as systematic versus sporadic registration; (ii) duration to registered land and mortgage transactions before and after the establishment of LAA; (iii) incidence of land-related disputes over time since the establishment of LAA; and (iv) issuance of building permits before and after the establishment of LAA.

Questionnaires

Overview

Complementing the baseline questionnaire, the endline questionnaire consists of over 20 sections with modules on:
· Identifying household members at baseline/new members
· Household characteristics (demographic information by each member of the HH)
· Employment and sources of any other cash transfers
· Identification and list of all the parcels
· Information on Parcel Acquisition, Documents, Land Value
· Land conflicts
· Rights to the land and perceptions of the risk
· Parcels rented out, rented in
· Characteristics of parcels
· Investments on land
· Perceptions about Lease, renting land, the land law, women's rights and LAA
· Ownership of Assets
· Expenditures
· Credit in the last 12 months
· Consumption
· Woman module

Data Collection

Data Collection Dates

Start	End	Cycle
2013-03	2013-06	Baseline
2019-09	2019-12	Endline

Data Collection Notes

I) Primary Data Collection
Instruments: The endline survey will revisit households that had been included in the 2013 baseline survey. The survey instruments (both from household head and women respondents) for the endline survey will be the same as the baseline survey with slight modification to cover changes in the dynamics of household composition and landownership as well as participation in the land tenure regularization program.
A short version of the endline survey instruments with a focus on housing and land-related investments will be administered for the geographic discontinuity design.
II) Secondary Data
The research team has access to high resolution aerial photos taken in 2002 and 2016 covering the entire Maseru city. The images will be processed to extract information, at least, at a parcel level on: (i) changes built up area, (ii) changes in roof types, (iii) changes in investments such as fences and improvements to home access, and (iii) access to infrastructure.

All primary data are electronically collected using Survey Solutions deployed on a highly secure World Bank Cloud with geographic questions capable of capturing parcel boundaries using high resolution imagery as a basemap.

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Data Processing

No content available

Data Appraisal

No content available